



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,304	10/07/2003	Yu-Yu Chen	MR2863-132	5218
4586	7590	02/24/2006	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			ALTER, ALYSSA M	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,304

Applicant(s)

CHEN, YU-YU

Examiner

Alyssa M. Alter

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application (PTO-152) |
| 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed November 28, 2005 with respect to claims 1 and 6-11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Turcott (US 6,409,675) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Turcott (US 6,409,675) in view of Cramer et al. (US 4,224,948). Turcott discloses an extravascular hemodynamic monitor, which may be used for sensing O₂ saturation vascular plethysmography. While Turcott discloses that the preferred embodiment is an implantable monitor, Turcott also discloses the possibility of using an external, non-invasive monitor that may be configured to resemble "a watch" (col. 11, line 56).

The monitor further includes an "antenna 100 and ground plane 112 into the printed circuit board 114 used by the circuitry of the monitor, as shown in FIG. 7f. The antenna is thus placed entirely within the housing of the monitor. While internal placement of the antenna 100 will attenuate the signal transmitted from and received by the monitor, in some applications the reduced manufacturing costs may warrant this approach. The transceiver 108 is placed at the intersection of the antenna 100 and

ground plane 112, and is connected to both”(col. 13, lines 40-49). Therefore, the antenna and transmitter are disposed on the upper portion of the printed circuit board.

Figure 5b displays the optical components 26 and 28 located in the wells 46 and 48 in contact with the electronic circuit 12 via feed-through connections 51 and 53. Since the optical components are placed on the lower side of the electronic circuit 12, which is inclusive of the circuit board 114, the optical components are placed on the lower portion of the circuit board 114.

As seen in figure 5a, “the combined O₂ saturation and vascular plethysmography sensor of the monitor 20, in which the light source 26, preferably parallel and oppositely oriented red and infrared LEDs, are positioned such that light is directed into the overlying tissue, and the light detector 28, preferably a photodiode, is positioned such that it collects light reflected by the overlying tissue”(col. 11, lines 10-17). Therefore, since the light is directed into the overlying tissue, the LEDs would inherently be placed on the back cover in order to be positioned on the skin of the patient.

In the alternative, Turcott teaches the device substantially as claimed but fails to teach placement of the sensors on the back of the watch housing. Cramer et al. teaches that it is known to dispose sensors on the back of a watch housing as set forth in figure 2, for the purpose of monitoring a pulse by infra-red source-detector combination. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the watch housing as taught by Turcott with the infrared sensors disposed on the back of the housing where the housing meets the patient's skin

as taught by Cramer et al., since such a modification would direct light into the overlying tissue of the patient wrist in order to derive the required data from the patient.

“The external telemetry unit 116 is positioned in a location regularly frequented by the patient, such as the patient's bedroom, and is preferably connected to the telephone line 120, allowing transfer of data to a central location for further processing or review by a clinician”(col. 12, lines 50-54). Therefore, the radio frequency antenna provides telemetry to an external device, this communicated signal between the receiver and antenna is the display signal.

As to claim 6, “the radio frequency transmitter/receiver provides for the automatic telemetry of data, without requiring the active participation of the patient or clinician. Thus data can be conveyed routinely and automatically, allowing more computationally demanding analysis to be done by an external device, or allowing human review at a central location”(col. 7, lines 17-23). Therefore, the external telemetry unit has a radio frequency receiver and microprocessor. Furthermore, the external unit inherently has a display for the facilitation of human review.

In the alternative, Turcott teaches the device substantially as claimed but fails to teach a display coupled to the microprocessor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the external unit as taught by Turcott with a computer since it was known in the art to utilize a computer as a external unit for clinicians to review patient data.

2. Claims 7-11 are rejected under 35 U.S.C. 103(a) as obvious over Turcott (US 6,409,675) in view of Bimbaum (US Patent Publication US 20030028116 A1). Turcott

discloses the claimed invention except for the radio frequency receiver or external device being worn on the wrist. Bimbaum teaches that it is known to utilize an external computer of a wrist device as a receiver unit as set forth on page 2, paragraph 25, for the purpose of providing the patient data via the display. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the external unit or external computer as taught by Turcott with the wrist display as taught by Bimbaum, in order to provide portability and enable the patient to monitor their own progress.

As to claims 9-11, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138 (MPEP 2106).

As to claims 10-11, the functional language and introductory statement of intended use of claims 9-11 have been carefully considered but are not considered to impart any further structural limitations over the prior art. The modified Turcott utilizes a radio frequency receiver as a wrist device as claimed by the Applicant. In addition nothing prevents the modified Turcott from wrapping the strap or headband around fitness equipment or an outdoor exercising device. Therefore, the pulse responsive device as taught by the modified Turcott is capable of being mounted on fitness equipment or an outdoor exercising device.

As to claims 7 and 8, Turcott discloses the claimed invention except for the radio frequency receiver having a timing circuit or an algorithm for calculating calories.

Bimbaum teaches that it is known to utilize a receiver with a calculating unit having a mathematical algorithm and timer for the determination of caloric expenditure, as set forth on page 3, paragraphs 30 and 32, for the purpose of providing the patient with setting and achieving an exercise goal. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the external unit or external computer as taught by Turcott with the timing circuit and algorithm for calculating calories as taught by Bimbaum, since such a modification would provide the patient with an exercise plan to promote healthy weight loss by caloric goals and expenditure. The exercise plan could also be modified to meet specific patient needs.

Specification

1. The disclosure stands objected to because of the following informalities: The use of the trademark Velcro has been noted in this application. It should be capitalized (ex. VELCRO) wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: blood flow pulsations and detecting blood flow pulsations.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

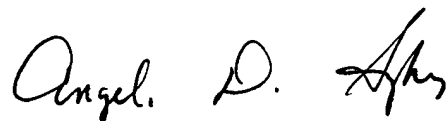
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alyssa M. Alter whose telephone number is (571) 272-4939. The examiner can normally be reached on M-F 9am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alyssa M Alter
Examiner
Art Unit 3762



ANGELA D. SYKES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700